

Claims 15 and 23 were rejected under 35 U.S.C. § 112, first paragraph; Claims 13 to 18 and 21 to 25 were rejected under § 102 over U.S. Patent No. 4,905,096 (Moriya); and Claims 19, 20, 26 and 27 were rejected under § 103 over Moriya in view of U.S. Patent No. 5,034,806 (Ikeda). Reconsideration and withdrawal of these rejections are respectfully requested.

With respect to the rejection of Claims 15 and 23 under § 112, first paragraph, Applicants respectfully submit that the specification adequately describes the subject matter of those claims. In this regard, the claimed invention of Claims 15 and 23 is directed to a printing system which executes a first magnifying process and a second magnifying process to prepare an image for printing on a printing medium in which the overall magnifying rate of the image to be printed is a product of a first magnifying rate multiplied by a second magnifying rate. Applicants respectfully submit that this subject matter is properly and adequately described in the specification and drawings of the application.

Not convincing

In particular, the image forming system of the present invention obtains information representing magnifying rates for determining magnification processing of an image for printing on a printing medium. See specification at page 21, lines 17 to 23. As seen in Figure 19, magnifying rate information regarding the magnifying rate by the hardware and regarding linear magnifying rate for image magnifying

processing are provided in the image format of Figure 19 for subsequent reading by the image forming system. Figure 19; and specification, page 21, lines 17 to 23. As described in step S100 of Figure 4, the image information representing an image to be printed is read from the image format, followed by the reading of a linear magnifying rate. Figure 4, step S104; and specification, page 22, lines 2 to 16. Magnifying processing is first executed based on the image data with the aid of software. Figure 5, step S110; and specification, page 23, lines 1 to 3.

According to the linear magnifying method of Figure 7, a magnifying rate is read prior to the start of magnifying processing. Specification, page 23, lines 4 to 12. In addition, vector magnifying is executed according to a designated magnifying rate. Figure 5, step S111; and specification, page 27, lines 1 to 18. After the two magnifications, image synthesizing is executed in step S115 of Figure 5. Specification, page 27, lines 14 to 18. In addition, the printer includes a magnifying processing portion for subjecting image data from the image memory to magnifying processing. Specification, page 30, lines 24 to 26; and page 31, lines 1 to 3. In this regard, an image transmitting command to the printer includes a parameter portion which includes a magnifying factor. Specification, page 39, lines 4 to 8. Accordingly, the magnifying rate is set for magnifying processing portion 10 of the printer with reference to instruction information from the image format of

Figure 19. Specification, page 43, lines 1 to 15. The magnifying processing portion 10 of the printer is described in Figure 18 and at pages 52 to 54 of the specification.

In summary, a first magnifying rate information, such as the linear magnifying rate for magnification processing performed in software, and the second magnifying rate information, such as that for the hardware in the printer, are utilized to determine an overall magnification rate for the image to be printed. Applicants therefore respectfully submit that the detailed disclosure in the specification and the figures adequately provide a full description of how first and second magnifying rate informations are used in a distributed processing environment of a printing system to perform first and second magnifying processing in order to achieve an overall magnification rate for an image to be printed. Accordingly, reconsideration and withdrawal of the § 112, first paragraph, rejection is respectfully requested.

Turning to the prior-art rejections, independent Claim 13 is directed to a printing system including an image processing section and a printing section to perform printing on a printing medium based on image data. The system includes a memory for storing the image data, first processing means for executing image data magnifying processing based on first magnifying rate information, and second processing means for executing the image data magnifying processing for an image to be printed based on the

image data magnified by the first processing means, based on second magnifying rate information. The first magnifying rate information is determined based on at least one of a resolution of printing performed by the printing section, a processing load to be borne by the first processing means, a capacity of the memory and a resolution shown by the image data, and a magnifying rate of the image to be printed on the printing medium based on the image data.

The applied art, namely Moriya and Ikeda, is not seen to disclose or suggest the foregoing features of independent Claim 13. Specifically, the applied art is not seen to disclose or suggest first processing means for executing image data magnifying processing based on first magnifying rate information, and second processing means for executing the image data magnifying processing for an image to be printed based on the image data magnified by the first processing means, based on second magnifying rate information, wherein the first magnifying rate information is determined based on at least one of a resolution of printing performed by the printing section, a processing load to be borne by the first processing means, a capacity of the memory and a resolution shown by the image data, and a magnifying rate of the image to be printed on the printing medium based on the image data.

Accordingly, the present invention allows for distributed magnification processing between a computing device and a printer depending on the capabilities and

processing load of the computing device, the resolution of the image data, and the desired magnification rate. In this manner, a desired magnified image of good quality can be printed in a printing system in which a computing device may have limited resources.

Moriya is seen to be directed to an image reading arrangement which utilizes an optical magnifying device and an electrical magnifying device so as to achieve a desired reading of an image. Moriya, abstract; and column 2, lines 11 to 50. Accordingly, Moriya is seen to be directed to image processing in an image reader such as a scanner, and is not seen to be directed to an image printing system. The magnification processing for the scanner of Moriya is not seen to base a first magnifying rate information on at least one of a resolution of printing performed by the printing section, a processing load to be borne by the first processing means, a capacity of the memory and a resolution shown by the image data, and a magnifying rate of the image to be printed on the printing medium based on the image data. Instead, the magnification means of Moriya is seen to first utilize the full range of the optical magnifying device and, if additional magnification is required, the electrical magnifying device is utilized; otherwise, the electrical magnifying device is not utilized. Moriya, column 7, lines 21 to 68.

In contrast, the invention of independent Claim 13 utilizes both a first processing means and a second processing means to execute image data magnifying processing, wherein the first magnifying rate is determined based on a variety of information, and is not determined based on the capability of an optical magnifying device.

In this regard, Ikeda is not seen to remedy the foregoing deficiencies of Moriya as a prior-art reference. Specifically, Ikeda is seen to be directed to an image processing apparatus for inputting image data in which the image data is subject to variable magnification means. Ikeda, abstract; and column 2, lines 16 to 27. Ikeda is only seen to disclose one magnification means, such as enlargement/reduction circuit 14, and is not seen to disclose or suggest first processing means based on first magnifying rate information, and second processing means for executing the image data magnifying processing for an image to be printed based on the image data magnified by the first processing means, based on second magnifying rate information, wherein the first magnifying rate information is determined based on at least one of a resolution of printing performed by the printing section, a processing load to be borne by the first processing means, a capacity of the memory and a resolution shown by the image data, and a magnifying rate of the image to be printed on the printing medium based on the image data.

Adm'd

claim
13
2,

The remaining art of record has been reviewed and is not seen to add anything that would remedy the foregoing deficiencies of Moriya and Ikeda as prior-art references.

Accordingly, independent Claim 13 is believed to be in condition for allowance, and such action is respectfully requested. In addition, independent Claim 21 is a method claim roughly corresponding to independent Claim 13 and is therefore believed to be in condition for allowance for the same reasons discussed above with respect to independent Claim 13.

The other claims in this application are each dependent from the independent claims discussed above and are therefore believed patentable for the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

In view of the foregoing remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney may be reached in our Costa Mesa, CA office at (714) 540-8700. All

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Respectfully submitted,



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